



VRS-20 Radar Level Sensor



The VRS-20 is a pulsed k-band radar level sensor developed by Valeport to work seamlessly with the Valeport TideMaster, operate standalone with optional integrated GPRS telemetry to internet, or interface directly to a third party data logger or PC. Versatile and simple to install, the VRS-20 addresses a number of the issues traditionally associated with level measurement.

Sensor

Non-contact technology removes the installation, corrosion & fouling issues of submerged sensors, while simplifying datum control. Accuracy and performance are unaffected by changes in water density and atmospheric conditions

Specification

Minimum Range:	0.8 m
Maximum Range:	20 m
Beam Angle:	±6°
Frequency:	25 GHz
Accuracy:	±10 mm
Precision:	1 mm
Footprint:	Radius at different ranges:

Range [M]	Radius [M]
2	0.21
5	0.53
10	1.05
20	2.10
35	3.68

Type Approval

The VRS20 radar sensor is fully compliant with:

ETSI EN 302 729-2 V1.1.2(2011-05) Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Level Probing Radar (LPR) equipment operating in the frequency ranges 6 GHz to 8,5 GHz, 24,05 GHz to 26,5 GHz, 57 GHz to 64 GHz, 75 GHz to 85 GHz;

Sampling

The VRS-20 offers averaged data output options for water level / tide measurements only. Wave measurement sampling is not available.

Raw Sampling Rate:	8 Hz
Averaging period:	Selectable (10 to 360 seconds)
Output Parameters:	Mean Range Mean Height Std. Deviation

Electrical

Range:	9-28 V DC
Power:	35mA @ 12v dc



Communications

RS232/485 and SDI12 fitted as standard with communications method defined by pin selection.

Optional integrated GPRS telemetry module

RS232:	Up to 200m cable, direct to serial port
RS485:	Up to 1000m cable, addressable half duplex
SDI 12:	Up to 100m cable.

Housing & Mounting

- Fully sealed, injection moulded housing rated to IP67 (NEMA 6) with PTFE window.
- Integral stainless steel mounting bracket with tool free, 2 axis adjustment.
- Integrated spirit bubbles for easy levelling.

Length:	255mm
Width:	130mm
Height:	130mm (75mm without mount)
Weight:	~2 kg

Ordering

0745001	VRS-20 Radar Level Sensor with mounting bracket, 5m cable with junction box, software, manual and transit carton.
0745002	VRS-20 Radar Level Sensor with integrated GPRS telemetry. Mounting bracket, 5m cable and junction box, software, manual and transit carton.

Shipping

Cardboard Carton:	37 x 28 x 20cm, ~ 4Kg
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Datasheet Reference: VRS-20 version 2e, June 2013

As part of our policy of continuing development, we reserve the right to alter at any time, without notice, all specifications, designs, prices and conditions of supply of all equipment

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